

Experiment Number: 554149

Test Type: **Genetic Toxicology - Bacterial
Mutagenicity**

G06: Ames Summary Data

Test Compound: **D-Limonene**

CAS Number: **5989-27-5**

Date Report Requested: **09/13/2018**

Time Report Requested: **21:41:53**

NTP Study Number:

554149

Study Result:

Negative

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Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	160 ± 4.1	121 ± 15.4	166 ± 6.4	151 ± 11.6	147 ± 8.4
0.3		132 ± 3.8			
1.0	138 ± 1.2	117 ± 9.4			
3.0	128 ± 7.0	131 ± 4.2			
10.0	135 ± 15.4	122 ± 7.5	159 ± 8.4		138 ± 7.5
33.0	Toxic	129 ± 4.6	175 ± 8.6	153 ± 21.0	135 ± 4.1
100.0	Toxic		151 ± 10.9	143 ± 1.8	136 ± 8.8
333.0			169 ± 9.5	129 ± 13.6	144 ± 2.3
1000.0			160 ± 7.3	112 ± 21.1 ^s	132 ± 11.0
3333.0				133 ± 2.5	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²	396 ± 9.0	410 ± 27.1			
Positive Control ³			986 ± 15.6	601 ± 37.7	2207 ± 108.8

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Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	150 ± 6.6
0.3	
1.0	
3.0	
10.0	136 ± 10.7
33.0	125 ± 4.5
100.0	138 ± 12.5
333.0	110 ± 9.9
1000.0	105 ± 9.6 ^s
3333.0	
Trial Summary	Negative
Positive Control ²	
Positive Control ³	1401 ± 53.4

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	19 ± 2.7	24 ± 4.2	26 ± 0.3	24 ± 4.3	33 ± 3.8
0.3		14 ± 4.3			
1.0	12 ± 3.2	15 ± 0.6			
3.0	20 ± 4.4	13 ± 2.1			
10.0	22 ± 2.2	17 ± 2.3	27 ± 4.5		26 ± 0.3
33.0	4 ± 1.5 ^s	0 ± 0.0 ^s	28 ± 4.4	31 ± 1.9	25 ± 1.7
100.0	Toxic		24 ± 4.8	20 ± 2.6	20 ± 1.8
333.0			21 ± 2.5	24 ± 3.5	21 ± 5.0
1000.0			24 ± 2.0	26 ± 0.5	13 ± 5.0 ^s
3333.0				25 ± 4.4	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²	320 ± 28.5	406 ± 4.0			
Positive Control ⁴			186 ± 0.6	163 ± 12.2	548 ± 20.4

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Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	24 ± 5.0
0.3	
1.0	
3.0	
10.0	28 ± 1.5
33.0	21 ± 2.2
100.0	24 ± 3.3
333.0	19 ± 4.5
1000.0	Toxic
3333.0	
Trial Summary	Negative
Positive Control ²	
Positive Control ⁴	309 ± 8.7

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Mutagenicity**G06: Ames Summary Data**

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Strain: TA1537

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	8 ± 2.9	4 ± 1.5	8 ± 0.3	5 ± 1.2	5 ± 0.9
0.3		5 ± 0.3			
1.0	6 ± 1.5	3 ± 1.2			
3.0	9 ± 2.3	3 ± 0.6			
10.0	8 ± 0.9	6 ± 1.7	7 ± 0.3		6 ± 1.5
33.0	4 ± 0.6 ^s	4 ± 0.7 ^s	13 ± 0.7	5 ± 0.9	9 ± 2.6
100.0	Toxic		8 ± 2.3	7 ± 1.5	6 ± 1.0
333.0			12 ± 2.0	7 ± 3.2	7 ± 1.9
1000.0			10 ± 2.2	4 ± 1.2	7 ± 2.7
3333.0				10 ± 2.0	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴			277 ± 46.3	193 ± 11.6	493 ± 20.1
Positive Control ⁵	212 ± 5.5	172 ± 18.5			

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Strain: TA1537

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	5 ± 0.9
0.3	
1.0	
3.0	
10.0	10 ± 2.7
33.0	6 ± 0.7
100.0	6 ± 0.9
333.0	6 ± 1.5
1000.0	6 ± 2.8 ^s
3333.0	
Trial Summary	Negative
Positive Control ⁴	506 ± 3.4
Positive Control ⁵	

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	23 ± 2.9	18 ± 1.2	34 ± 4.7	32 ± 0.6	44 ± 7.3
0.3		18 ± 1.7			
1.0	22 ± 4.3	21 ± 4.7			
3.0	23 ± 5.5	17 ± 4.6			
10.0	17 ± 2.2	23 ± 2.0	40 ± 7.2		36 ± 7.0
33.0	13 ± 3.6	13 ± 4.3 ^s	37 ± 4.7	39 ± 1.2	32 ± 3.0
100.0	Toxic		46 ± 2.0	34 ± 1.8	36 ± 8.0
333.0			48 ± 1.5	26 ± 3.1	30 ± 1.7
1000.0			53 ± 5.9	16 ± 8.4	32 ± 2.6
3333.0				14 ± 8.1 ^s	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³			510 ± 36.9	380 ± 16.6	1850 ± 215.9
Positive Control ⁶		728 ± 67.6			
Positive Control ⁷	752 ± 46.8				

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Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	32 ± 2.3
0.3	
1.0	
3.0	
10.0	31 ± 3.5
33.0	26 ± 3.0
100.0	27 ± 5.8
333.0	28 ± 3.9
1000.0	20 ± 2.1 ^s
3333.0	
Trial Summary	Negative
Positive Control ³	1276 ± 33.1
Positive Control ⁶	
Positive Control ⁷	

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LEGEND

Values given as Mean or Mean \pm Standard Error Mean

The number of samples = 3, unless samples marked toxic or contaminated were excluded from mean and SEM calculations

CAS Number = Chemical Abstracts Service registry number

1: Vehicle Control: 95% Ethanol

2: 1.0 ug/Plate Sodium Azide

3: 1.0 ug/Plate 2-Aminoanthracene

4: 2.5 ug/Plate 2-Aminoanthracene

5: 50.0 ug/Plate 9-Aminoacridine

6: 5.0 ug/Plate 4-Nitro-O-Phenylenediamine

7: 50.0 ug/Plate 4-Nitro-O-Phenylenediamine

s: Slight Toxicity

**** END OF REPORT ****